

# PROCEEDINGS OF THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON

## SERIES C. JOURNAL OF MEETINGS

---

VOLUME 13

No. 2, 1948

---

### SPECIAL MEETING

WEDNESDAY, 3RD MARCH, 1948, at 5.30 p.m.

Notice is hereby given that a Special Meeting of the Society will be held at 41, Queen's Gate, South Kensington, S.W.7, on Wednesday, the third day of March, 1948, at 5.30 p.m., for the purpose of considering and, if thought fit, passing the following proposed changes in the Bye-Laws :—

#### (1) CHAPTER IV. *Officers.*

That the following new paragraph be added to Chapter IV of the Bye-Laws :—

“§ 2. In addition to and notwithstanding any other provisions of these Bye-Laws, the Council shall have power at any time to appoint not more than two additional Honorary Officers from amongst the Fellows of the Society for such specific purpose as they may from time to time decide to be necessary to the proper management of the Society's affairs ; and such additional Honorary Officers shall become members of the Council in order of seniority as and when a vacancy or vacancies in the Council shall occur so that the total number of the members of the Council including Officers and supplementary Honorary Officers shall not at any time be more than seventeen and that no such supplementary Honorary Officer shall hold office for more than ten years successively.”

#### (2) CHAPTER XXI. *Ordinary Meetings of the Society.*

That the present § 1 be deleted and the following substituted :—

“§ 1. The Ordinary Meetings of the Society shall be held on the first Wednesday in each month (except January and August), beginning at half-past five in the evening, or at such other days or times as the Council shall from time to time direct.”

Dated this 7th day of February, 1948.

By order of the Council.

N. D. RILEY,

*Honorary Secretary.*

## ORDINARY MEETING

WEDNESDAY, 3RD MARCH, 1948.

The meeting will open immediately on the conclusion of the Special Meeting called above.

## AGENDA

1. Confirmation of the Proceedings of the Ordinary Meeting held on 4th February, 1948.
2. Recommendations of candidates for Fellowship.
3. Announcement of election of new Fellows.
4. Additions to the Library.

*Purchased.*

Lespesme, P. *Les insectes des Palmiers*. 8vo. Paris, 1947.

In addition, separates have been presented by Mr. G. Fox Wilson, the Smithsonian Institution, the American Entomological Society, Dr. A. D. Imms, the Commonwealth Institute of Entomology, Dr. E. B. Ford, Captain R. A. Jackson, Mr. W. E. F. Thomson, Dr. W. H. Thorpe, and the Anti-Locust Research Centre.

5. Admission of Fellows.
6. Communications.

## (1) Dr. O. W. Richards.

The insects, especially Hymenoptera, of the Channel Islands.

## [Abstract]

Enough is now known of the fauna of the Channel Islands to detect certain general principles. The fauna is French rather than British; this is shown in several subspecies of Hymenoptera. There is a marked southern element and a few interesting endemics. Differences from the British fauna seem to be more marked in some groups than in others.

## (2) Mr. A. P. Kapur.

The feeding-habits of the lady-bird beetles with particular reference to the herbivorous species (Coleoptera, COCCINELLIDAE).

## [Abstract]

Whereas the majority of the lady-bird beetles are carnivorous in habit, the members of the subfamily EPILACHNINAE and of the tribe Psylloborini are herbivorous and fungivorous respectively. These three groups exhibit structural modifications in the mouth-parts, alimentary canal, etc. The mandibles, though always possessing characteristic features for each group, show greater diversity of form in the herbivorous group than in the other two. The mode of feeding, as observed in a number of species in the larval as well



as the adult stages, of EPILACHNINAE, is very different from that of other kinds of phytophagous insects such as the caterpillars of Lepidoptera and the larvae and adults of most CHRYSOMELIDAE or other herbivorous Coleoptera, which usually ingest the leaf-tissue in bits and pass out excrement in the form of solid lumps. The EPILACHNINAE, on the other hand, scrape the leaf-tissue and compress it between their mandibles, and suck the juices which during the process of scraping and compressing they are able to hold in the spaces between the usually dense, long and rather delicate hairs on the galea and lacinia. Essentially this process of feeding is very much like the one practised by the majority of the carnivorous species of the family, which pierce and hold the prey with their mandibles, masticate its tissue, and suck the body contents, thus rendered fluid. The excrement passed out in both the herbivorous and carnivorous species is in fluid form, and except for the mid-gut, which is about twice as long as the body in the former and about two-thirds the length of the body in the latter, the alimentary canal does not show marked differences in general structure. In the fungivorous species, which feed mostly by scraping mildew, the mid-gut is more like that in the carnivorous species. Other evidence as well as that of the feeding habits seems to show that the herbivorous and fungivorous habits are secondary acquisitions in the family and have risen quite independently of each other.

---

If circumstances permit tea will be served in the Library before the meeting.

### NOTICES

A card index of Fellows' addresses arranged on a geographical basis is now available for the use of Fellows in the Society's Rooms. Addresses in Great Britain are grouped under counties; elsewhere under Dominions, Colonies, Foreign States, etc.

---

### ADMISSION OF FELLOWS

Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-Laws and attends the meeting on 3rd March, 1948, is requested to inform the Society before 5.15 p.m. on that date.

## PROCEEDINGS OF THE ORDINARY MEETING HELD ON 4TH FEBRUARY, 1948.

Dr. C. B. Williams, M.A., President, in the Chair.

Present, 74 Fellows and 24 Visitors.

The President announced that he had nominated Dr. B. M. Hobby, Miss C. Longfield, and Mr. G. Fox Wilson as Vice-Presidents for the coming year.

The minutes of the Annual Meeting and of the Ordinary Meeting held on 21st January were confirmed and signed by the President, subject to the insertion of "in this case" in the last line but one of the paragraph relating to Mr. Gilmour's exhibit, so that it read "... was definitely of British origin, and, in this case, most probably came from Hertfordshire".

The names of the following candidates for election were read :—

For the first time : J. S. Ball, B.Sc., Miss J. van Konynenburg, A. S. G. Mardon, K. G. Smith, Lt.-Col. Charles Stockley, T. W. Venkatraman, B.A., M.Sc., and C. Weightman.

For the second time : T. L. C. Bottomley, R. A. Cumber, Miss M. Farquar, B.Sc., J. C. van Hille, Ph.D., M. G. Ramdas Menon, A. Giordani Soika, P. G. Taylor, A. B. M. Whitnall, M.Sc., C. J. M. Willemse, and T. E. Woodward.

The Secretary announced that the following had been elected Fellows of the Society : J. Armitage, Avocet, Heath Grove, Buxton, Derbyshire ; Dr. A. Diakonoff, Zoological Museum, Buitenzorg, Java ; J. D. H. Hillaby, 1, Tanza Road, London, N.W.3 ; The Rev. Desmond Murray, The Priory, Wellington Street, Leicester ; D. W. Williams, M.Sc., Ph.D., Dept. of Agriculture for Scotland (Infestation Control), 69, Berkeley Street, Glasgow, C.3, Scotland.

The President announced that Mr. R. M. Prideaux, a former Fellow of the Society, had made a donation of Fifty Guineas towards the purchase of books for the Library.

Thanks were voted to donors of gifts to the Library since the last meeting.

Captain Jackson showed stems of *Viburnum lantana* (the Wayfaring tree or hedge hydrangea) which had been bored by the larvae of *Sesia andreniformis*. One stem had been attacked by a bird that had pecked right into the larval burrow about an inch and a quarter above the exit hole ; the bird had evidently extracted the larva. On the other stem, the bird had apparently commenced a similar attack, but had either been frightened away or become disheartened at the hardness of the wood. He remarked that other members of the genus, particularly the swallow feeders, were much subject to destruction by birds, but it was believed that attacks on *andreniformis* were of rare occurrence. In the very cold weather last year the larvae of *Sesia culiciformis* in birch stumps had suffered very heavily, probably from attacks by the green woodpecker.

Mr. G. A. Matthews, Miss P. Gardiner, Brigadier E. A. Glennie and Mr. J. J. Williams signed the Obligation Book and were admitted Fellows of the Society.

Dr. C. G. Butler and Mr. C. H. Ribbands (a visitor) then gave an account of recent work on the sense physiology and behaviour of the Honeybee. Abstracts of their remarks appeared on page 2.

In reply to an enquiry by Dr. Thorpe, Dr. Butler said that the degree of overlapping of the loops of the round figure of eight dances corresponded



with the distances to be covered from the hive, but did not indicate direction. Dr. Thorpe considered the suggestion made by Dr. Butler that supersonic vibrations might play a part in communication between bees was very surprising; they could only be produced possibly by stridulation (not the vibration of wings), or the expulsion of air through an orifice.

Dr. Williams enquired whether the differences in the dances might be an effect rather than a cause, and perhaps were related to muscular fatigue rather than to future behaviour. Dr. Butler thought this was not the case.

Mr. E. B. Britton said that Professor von Frisch had recently told him that, from observation of bee dances, he had deduced the position of a source of honey 500 metres from the hive with an accuracy of 10 degrees in direction and two metres in distance. In other experiments von Frisch had discovered that bees, in dancing horizontally on the alighting board, only indicate the direction of the source of food accurately when they are able to see a portion of the sky.

Dr. J. McGarvey enquired whether bees danced when they returned with water, or only when with pollen and honey, to which Dr. Butler replied that the behaviour was the same in both cases. He also asked whether ultra violet light from the sun influenced direction even when the sun was overcast, and Dr. Butler replied that the theory that bees were sensitive to the ultra violet end of the spectrum only or in particular was no longer accepted.

Mr. J. D. Carthy (a visitor) enquired what the reaction of the bee would be if its normal journey were altered by removal to a new point of departure; Dr. Butler said he thought it would behave as if it had the entire journey to do from the original point.

Dr. Williams asked whether there was any evidence that bees become fatigued other than by food shortage. Dr. Gunn remarked that the present view was that fatigue in vertebrates was rarely muscular and was usually a central nervous phenomenon.

Mr. C. N. Hawkins asked whether over-population of any one stage speeded up progress to the next stage or caused any reversal, to which Dr. Butler replied that if abnormal colonies were made up containing either all young or all old bees, the bees in these colonies were able to adapt themselves so that all the necessary duties were performed but, for example, although an old bee could nurse a brood, it was not, of course, physiologically capable of doing so as efficiently as a young bee of the normal nursing age.

Captain Bushell, referring to the course taken by a bee from the food source to the hive when the position of the former had been altered, asked whether the bee improved its time on subsequent journeys over the new course. Dr. Butler replied that this would appear unlikely, as the bee, though capable of adding to a chain of action, had little or no ability to omit any of the links.

N. D. RILEY, *Hon. Secretary.*

---

The next meeting will be held on Wednesday, 7th April, 1948, at 5.30 p.m.

